

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/062985 A2**

(51) International Patent Classification: Not classified

(21) International Application Number:  
PCT/US2004/043719

(22) International Filing Date:  
23 December 2004 (23.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/532,231 23 December 2003 (23.12.2003) US

(71) Applicant (for all designated States except US): AMERICAN BIOSCIENCE, INC. [US/US]; 2730 Wilshire Blvd., Suite 110, Santa Monica, CA 90403 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SOON-SHIONG, Patrick [US/US]; 11718 Barrington Court, #311, Los Angeles, California 90049 (US). DESAI, Neil P. [US/US]; 2730 Wilshire Blvd., Suite 110, Santa Monica, California 90403 (US). TAO, Chunlin [US/US]; 310 North Crescent Drive, #204, Beverly Hills, California 90210 (US). YU, ChengZhi [US/US]; 1550 Armacost Avenue, #102, Los Angeles, California 90025 (US).

(74) Agents: GAGALA, Bruce M. et al.; LEYDIG, VOIT & MAYER, LTD., Two Prudential Plaza, 180 North Stetson Avenue, Suite 4900, Chicago, Illinois 60601 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/062985 A2

(54) Title: DI-ESTER PRODRUGS OF CAMPTOTHECIN, PROCESS FOR THEIR PREPARATION AND THEIR THERAPEUTICAL APPLICATIONS

(57) Abstract: The present invention is related to 10,20-di-O ester derivatives of camptothecin and pharmaceutical formulations thereof. The compounds and pharmaceutical formulations of the present invention possess increased biological life span and bioavailability and reduced toxicity, while maintaining anti-cancer activity.